Docket No. AB-233U1

Remarks/Arguments

The originally filed claims were numbered incorrectly. Two instances of "Claim 5" were originally filed. By way of the present amendment, Applicants have renumbered the first instance of "Claim 5" to be "Claim 44". New Claim 44 contains the original subject matter from the original first instance of "Claim 5". Applicants have also amended Claims 1, 5, 7, 10, 12, 14, 16, 23, and 43. Forty-four (44) claims remain pending in the application: Claims 1-44, of which Claims 1, 24, 40, and 43 are independent. Applicants respectfully request reconsideration of the pending claims, in view of the amendments above and comments below.

Claim Rejections - 35 U.S.C. § 102(b)

The Examiner rejected Claim 1 under 35 U.S.C. § 102(b), as being anticipated by Brownlee et al., U.S. Patent No. 4,134,408. Applicants respectfully traverse this rejection.

Anticipation requires that each and every element set forth in the claim be found in a single prior art reference. MPEP §2131. Independent Claim 1 contains an element which is not found or taught in Brownlee et al. The element, "*an antenna/charging coil that is used to inductively charge the rechargeable battery with the implanted stimulator and to transcutaneously communicate with the stimulator*", is not shown or taught by Brownlee et al, emphasis underlined.

Brownlee et al. teach "an energy conservation system for extending the useful lifetime of an implantable cardiac pacer of the type having an internal primary battery power source." See Col. 1, lines 54-57. Furthermore, in order to enhance the energy conservation capabilities as taught by the Brownlee et al. reference, "a small secondary or rechargeable battery may be provided within the implantable portion of the system. The purpose of this small rechargeable battery is to permit the pacer to operate on internal power for a few days without drawing any current from the primary battery." See Col. 2, lines 28-34. Brownlee et al. also teach an external energy source having a radio-frequency source for powering the cardiac pacer. A transmitting coil L1, serves to transmit electromagnetic energy from the external energy source through the intervening air space and skin layer to the energy receiving coil L2 mounted within the implantable cardiac pacer. See Col. 3, lines 56-60.

Applicants teach an "antenna/charging coil 34 [is] used for inductively charging the rechargeable battery in the stimulator and also for performing forward and backward FSK (frequency shift keying) or forward OOK (on-off keying) telemetry communication with the stimulator." See paragraph **[0045]** of the specification. The antenna/charging coil 34 is housed inside an external device, e.g. external chair pad 32. See FIGS. 1 and 2-2. Brownlee et al. simply teach an external RF energy source used for recharging the internal rechargeable battery. Brownlee et al. fail to teach a single antenna/charging coil having the function of recharging the battery and communicating with the stimulator by performing forward and backward FSK or forward OOK telemetry communication with the stimulator using the same antenna/charging coil.

Furthermore, in order to better claim the invention, i.e., in order to have the claim directed to the essential elements of the invention, Claim 1 has been amended to delete reference to "a chair pad". The chair paid is, in one embodiment, just a housing wherein the single antenna/charging coil 34 is housed. However, the invention may be practiced regardless of where the single antenna/charging coil is located as long as it is external to the patient. As the Brownlee et al. reference does not teach or suggest using a single antenna/charging coil in this fashion, it is submitted that Brownlee et al. do not anticipate independent Claim 1.

In light of the amendments to independent Claim 1, dependent Claims 5, 7, and 14, have also been amended to remove reference to "the chair pad". Claim 10 has been amended to include "a chair pad" as an element for the embodiment of the inventions claimed in Claim 10. Claims 12, 16, and 23 have been amended to depend from Claim 10 so that "the chair pad" element within these claims has proper antecedent basis. No new matter has been introduced by way of these amendments which find support throughout the specification.

Claim Refections - 35 U.S.C. § 103

The Examiner rejected Claims 2 and 3 under 35 U.S.C. §103(a) as being unpatentable (obvious) over Brownlee et al. (U.S. Patent No. 64,134,408) in view of Griffith (U.S. Patent No. 6,073,050). The Examiner further rejected Claims 4-26 and 29-43 under 35 U.S.C. §103(a) as being unpatentable over Brownlee et al. ('408 reference) as applied to Claim 1, and further in view of Kung (U.S. Patent No. 6,212,430) and Seelye (U.S. Patent No.

5,642,030). The Examiner also rejected Claims 27 and 28 under 35 U.S.C. §103(a) as being unpatentable over Brownlee et al. ('408 patent) in view of Kung ('430 patent) and Seelye ('030 patent) as applied to Claims 4-26 and 29-43, and further in view of Griffith ('050 patent) as applied to Claims 2 and 3.

Applicants respectfully traverse the rejections of Claims 1-44 in view of the Brownlee et al. reference or the combined references of Brownlee et al., Griffith, Kung, and Seelye for the reasons set forth below.

As explained above the Brownlee et al. reference fails to show or suggest using a single antenna/charging coil to both inductively recharge the rechargeable battery in the stimulator and to perform telemetry communication, e.g., forward and backward FSK or forward OOK telemetry communication, with the stimulator. Independent Claims 1, 24, 40, and Claim 43 all include a single antenna/charging coil that inductively recharges the rechargeable battery in the stimulator and performs telemetry communication with the stimulator. Thus, it is respectfully submitted that Applicants' claimed invention would not have been obvious at the time the invention was made to a person having ordinary skill in the art because it fails to show or suggest this key feature of the invention –a single antenna/charging coil that performs both the recharging function and the telemetry communication function– and this deficiency is not supplied by the secondary references, Griffith, Kung and Seeyle The Brownlee et al. reference falls short of Applicants' invention because it lacks providing an external RF energy source used for recharging the internal rechargeable battery in the stimulator and communicating with the stimulator by performing telemetry communication with the stimulator. Hence, it is respectfully submitted that a *prima facie* case of obviousness has not been established by the Brownlee et al. reference or the combined references of Brownlee et al., Griffith, Kung, and Seelye.

In view of the foregoing discussion, it is believed that the obviousness rejection is overcome with respect to independent Claims 1, 24, 40, and 43 and that this rejection should be withdrawn.

Claims 2-23 and 44 are dependent upon independent Claim 1 directly or indirectly and, for this reason alone (although not necessarily the only reason), should be allowable for the same reasons that Claim 1 is allowable.

Claims 25-39 are dependent upon independent Claim 24 directly or indirectly and, for this reason alone (although not necessarily the only reason), should be allowable for the same reasons that Claim 24 is allowable.

Claims 41-42 are dependent upon independent Claim 40 and, for this reason alone (although not necessarily the only reason), should be allowable for the same reasons that Claim 40 is allowable.

Conclusion

In view of the above, it is respectfully submitted that Claims 1-44 should be in condition for allowance. An indication of allowability with respect to these claims is earnestly solicited.

The Examiner is invited to telephone the undersigned, Victoria A. Poissant, should any issues remain after consideration and entry of this response, in order to permit early resolution of such issues.

Respectfully Submitted,

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